

Fig. 1.

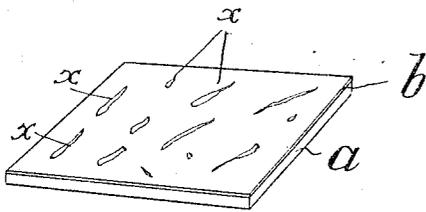


Fig. 2.

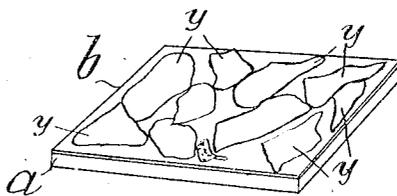


Fig. 3.

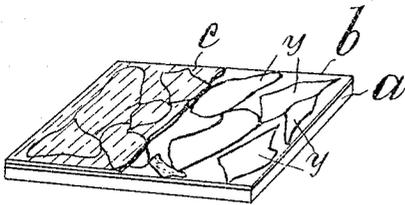


Fig. 4.

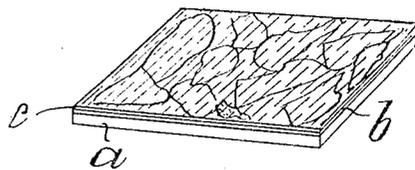


Fig. 5.

WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM GEORGE WILLIAMS, OF HOVE, ENGLAND, ASSIGNOR TO WALTER GEORGE KENT,
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ORNAMENTING GLASS.

No. 916,516.

Specification of Letters Patent.

Patented March 30, 1909.

Application filed September 12, 1905. Serial No. 278,151.

To all whom it may concern:

Be it known that I, WILLIAM GEORGE WILLIAMS, a subject of the King of Great Britain and Ireland, residing at Hove, Sussex, England, have invented a new or Improved Process of Ornamenting Glass, of which the following is a specification.

My invention relates to a new or improved process of ornamenting glass, or other transparent or translucent materials, by means of which highly decorative effects may be obtained cheaply and efficiently.

In the accompanying drawings I have shown, somewhat diagrammatically, the several steps constituting my present invention.

Figure 1 shows a small sheet of glass lying flat upon a table and with a facing or layer of water glass paint flowed upon the upper surface of the sheet of glass; Fig. 2 shows said sheet, drops of alcohol, or other liquid which alters the surface tension of said facing or layer, having been sprinkled thereon; Fig. 3 shows the said sheet with the facing dried thereon and spaces of clear glass formed as a result of the application of the tension-altering liquid; Fig. 4 shows the backing partially applied to the sheet of glass; and Fig. 5 shows a completed sheet.

In carrying my invention into effect I take glass, celluloid or other transparent or translucent materials and on one surface thereof I place a coating or layer of coloring matter. This may conveniently be made up of a mixture of water color pigment and water and with or without, preferably with, size therein. This coating or layer, hereinafter termed the "facing", may be laid on by a brush or by pouring or otherwise as may be found convenient. While the facing is still wet I add thereto a liquid which alters the surface tension of the facing, and which consists of any convenient liquid such as alcohol, naphtha, or the like which will have the effect of opening out or separating the still liquid facing into patches, streaks or insulae or of forming spaces or lagunae of itself (that is of the tension-altering liquid) within the said facing. I then allow the whole to dry. When dry, it is found that the patches, streaks or insulae are now represented by hardened or dried coloring matter and that the spaces or lagunae formerly occupied by the tension-altering liquid are now represented by more or less clear spaces showing the glass or other material employed. I now add another coating

or layer which for distinction I term the "backing" of paint, varnish, metallic foil, paper or other suitable material and caused to adhere in any convenient way. When the whole has been allowed to dry or set it is ready for use.

Having briefly described my invention and in such manner as to define its scope, I shall now proceed to describe by way of a type or example a preferred way of carrying it into practice. In this preferred way I first take a piece of translucent or transparent material (*a* in the drawings) that is to be ornamented, and which for the purpose of the following description I shall assume to be glass, and I lay it flat upon a table or bench, *A*. I then apply to the upper surface of the glass (*b* in the drawings) a facing of water-glass paint, that is to say a paint consisting of a pigment mechanically suspended in a weak solution of water glass. The facing is applied to the surface of the glass by means of a hog-hair distemper brush. After the facing has been applied and while it is still in a wet condition, I sprinkle the tension-altering liquid (drops thereof being shown at *x* in the drawings) thereon by means of a brush. The liquid preferred consists of alcohol in the form of ordinary commercial methylated spirit, and it acts on the facing in the manner I have already described. After the application of said liquid I maintain the glass in its horizontal position and allow the tension-altering liquid to evaporate and the facing to dry hard. When thoroughly dry I apply over the whole of the upper surface of the glass, *i. e.* over the patches, streaks or insulae and over the spaces or lagunae (*y* in the drawing) a backing (*c* in the drawings) of oil color paint of a color and shade that is in contrast with that of the facing. The oil color paint preferably used is composed of japan gold size, 2 parts; turpentine, 1 part; boiled linseed oil, 1 part; and a proportion of coloring matter suitable for obtaining the desired tint or tints.

In order to protect the backing and prevent moisture or damp acting on it and on the facing, and so in time spoiling the effect that has been produced by the treatment I have described, I coat the backing with a thick layer of silicate paint. This protective coating should be allowed to have free access of air to it for several days before the treated glass is applied to walls or the like.

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In some cases I may use a silicate paint or a color pigment mixed with water to which a binding medium is added, as the facing. When I employ such, the binding medium I use depends upon the nature of the pigment employed. For instance, with pigment having a metallic or earthy base I find it desirable to use a weak solution of water glass, and with bronze or other metallic powders, dextrin.

Instead of sprinkling the tension-altering liquid over the facing by means of a brush, feathers will answer the purpose, or a syringe or spraying device may be used to apply the said liquid over the facing.

Although I have mentioned oil color paint as a suitable backing, spirit, water or silicate paints may be employed for the same purposes.

In some cases before putting on the backing I apply over the whole upper surface, a water silicate paint of a different color from that employed to form the facing, and when this second application of water silicate paint is dry I apply the backing and the protective coating in the manner I have described.

Spaces or lagunæ in the facing may also be produced, but less readily and safely, by liquids other than alcohol. For instance, acetic acid, naphtha, spirits of turpentine and the like may be employed. But I find that none of the liquids mentioned are so clearly and effective in working as the alcohol.

After the glass has been subjected to the processes mentioned, the ornamented glass

is ready for use and can be applied to and securely fixed to the wall or other surface to be decorated by means of an oil cement or composition.

Having now described my invention what I claim and desire to secure by Letters Patent is:--

1. In a process of ornamenting transparent or translucent material, applying to the surface of the back of said material a layer of liquid colored matter, and sprinkling upon said layer, while wet, a plain liquid which alters the surface tension of the said liquid colored layer, so as to leave clear spaces in the layer of colored matter as viewed from the said transparent or translucent material.

2. In a process of ornamenting transparent or translucent material, applying to the surface of the back of said material a layer of liquid coloring matter, sprinkling upon said layer, while wet, a plain liquid which alters the surface tension of the said liquid colored layer so as to leave clear spaces in the layer of colored matter as viewed from the uncoated front side of said transparent or translucent material, allowing the whole to dry, and applying to the dried layer a backing of ground color.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM GEORGE WILLIAMS.

Witnesses:

RODERICK PERRETT,
CHARLES CARTER.